DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-010393
Date Inspected: 09-Nov-2009

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name: Chen Xi

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG Crossbeams and components

Summary of Items Observed:

On this day CALTRANS OSM Quality Assurance Inspector (QA) Steve Hall was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

OBG CROSS BEAM CB1

This crossbeam has been brought back to the dock in order to allow American Bridge / Fluor (ABF) and Caltrans QA inspectors to perform Ultrasonic Testing (UT) on the Complete Joint Penetration (CJP) corner joints using the “D” scanning pattern described in AWS D1.5 figure 6.7. The purpose for this particular testing method is to detect suspected transverse cracking of the CJP corner joints.

OBG CROSS BEAM CB2

This crossbeam has been brought back to the dock in order to allow American Bridge / Fluor (ABF) and Caltrans QA inspectors to perform Ultrasonic Testing (UT) on the Complete Joint Penetration (CJP) corner joints using the “D” scanning pattern described in AWS D1.5 figure 6.7. The purpose for this particular testing method is to detect suspected transverse cracking of the CJP corner joints.

OBG CROSS BEAM CB3

This crossbeam has been brought back to the dock in order to allow American Bridge / Fluor (ABF) and Caltrans QA inspectors to perform Ultrasonic Testing (UT) on the Complete Joint Penetration (CJP) corner joints using the “D” scanning pattern described in AWS D1.5 figure 6.7. The purpose for this particular testing method is to detect suspected transverse cracking of the CJP corner joints.

OBG CROSS BEAM CB4

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

OBG CROSS BEAM CB5

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

OBG CROSS BEAM CB6

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

OBG CROSS BEAM CB7

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

OBG CROSS BEAM CB8

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

OBG CROSS BEAM CB9

This QA observed ZPMC qualified welding personnel identified as 019006 perform FCAW welding on weld joints identified as FB205-024-031 and 032. ZPMC QC identified as Mr. Liu Chuan Gang was present to monitor the welding process. The welding parameters as measured using QC’s calibrated instruments appeared to be in general compliance with WPS-B-T-2232-B-U2-F.

This QA observed ZPMC qualified welding personnel identified as 222396 perform FCAW welding on weld joints identified as FB205-023-029 and FB205-024-025. ZPMC QC identified as Mr. Liu Chuan Gang was present to monitor the welding process. The welding parameters as measured using QC’s calibrated instruments appeared to be in general compliance with WPS-B-T-2231-B-U2-F.

OBG CROSS BEAM CB10

This QA observed that no significant work was being performed on this crossbeam during the time QA was

present.

OBG CROSS BEAM CB11

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

OBG CROSS BEAM CB12

This QA observed ZPMC personnel flame straightening the SPCM bottom panel on the south end of this crossbeam. The workers were observed using a temporary formed angle fixture stretched across the end of the crossbeam, hooked underneath a stiffener on the east side panel and one of the stiffeners on the intermediate panel, with a jack near the center of the angle to secure and support the top side of the panel. Another jack with a steel square tubing extension was used to apply pressure to the underside of the panel. The workers then commenced applying heat to approximately 500mm of bottom panel weld joint CB201C-012-002. This procedure appeared to be in general compliance with the approved written procedure on site identified as HSR-(B)-0328. See attached photos for details.

OBG CROSS BEAM CB13

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

OBG CROSS BEAM CB16

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

OBG BAY 5

This QA observed ZPMC qualified welding personnel identified as 205390 perform FCAW welding on traveler rail weld joint identified as 11TR1-026-011. ZPMC QC identified as Mr. Zhong Chong Biao was present to monitor the welding process. The welding parameters as measured using QC’s calibrated instruments appeared to be in general compliance with WPS-B-T-2132.

This QA observed ZPMC qualified welding personnel identified as 217185 perform FCAW welding on traveler rail weld joint identified as 11TR1-025-008. ZPMC QC identified as Mr. Zhong Chong Biao was present to monitor the welding process. The welding parameters as measured using QC’s calibrated instruments appeared to be in general compliance with WPS-B-T-2132.

This QA observed ZPMC qualified welding personnel identified as 204342 perform FCAW welding on traveler rail weld joint identified as 11TR1-025-011. ZPMC QC identified as Mr. Zhong Chong Biao was present to monitor the welding process. The welding parameters as measured using QC’s calibrated instruments appeared to be in general compliance with WPS-B-T-2132.

This QA observed ZPMC qualified welding personnel identified as 215185 perform FCAW welding on traveler rail weld joint identified as 11TR1-028-008. ZPMC QC identified as Mr. Zhong Chong Biao was present to

monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2132.

This QA observed ZPMC qualified welding personnel identified as 215078 perform FCAW welding on traveler rail weld joint identified as 10TR3-020-009. ZPMC QC identified as Mr. Zhong Chong Biao was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2132.

This QA observed ZPMC qualified welding personnel identified as 215250 perform FCAW welding on traveler rail weld joint identified as 10TR3-020-012. ZPMC QC identified as Mr. Zhong Chong Biao was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2132.

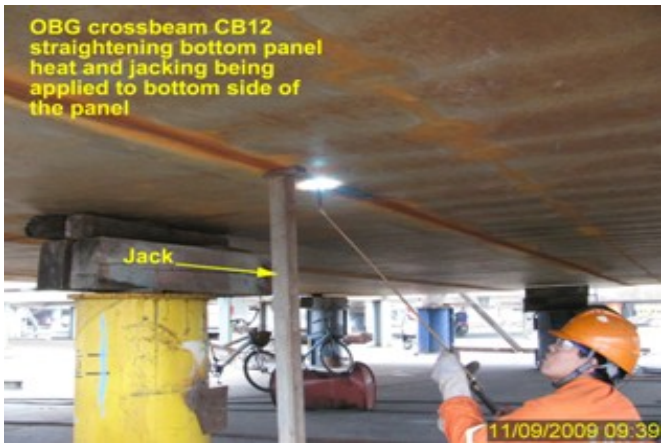
OBG BAY 6

This QA observed ZPMC qualified welding personnel identified as 048659 perform SMAW repair welding on tower strut weld joint identified as WD1-A305-77M-2-8B. ZPMC QC identified as Mr. Zhang Bao Bo was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-485-SMAW-2G (2F)-FCM-repair.

This QA observed ZPMC qualified welding personnel identified as 053753 perform SMAW repair welding on tower strut weld joint identified as WD1-A305-65M-4-7A. ZPMC QC identified as Mr. Zhang Bao Bo was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-485-SMAW-2G (2F)-FCM-repair.

This QA observed ZPMC qualified welding personnel identified as 048617 perform SMAW repair welding on tower strut weld joint identified as WD1-A305-77M-1-1B. ZPMC QC identified as Mr. Zhang Bao Bo was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-485-SMAW-2G (2F)-FCM-repair.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.



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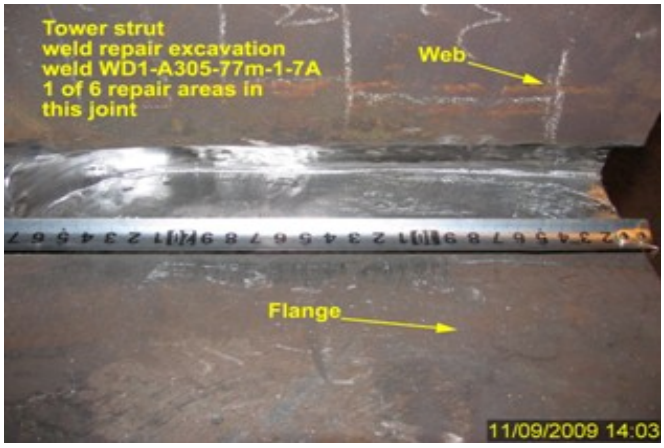

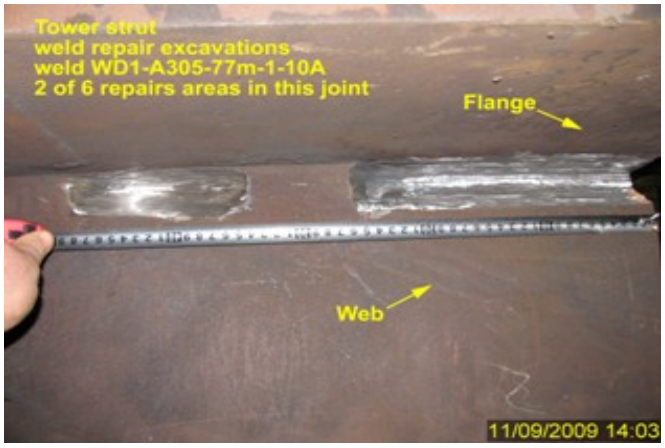

Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang (15000422372), who represents the Office of Structural Materials for your project.

Inspected By:	Hall,Steven	Quality Assurance Inspector
Reviewed By:	Patterson,Rodney	QA Reviewer